AMENDMENTS TO THE CLAIMS

Please cancel without prejudice claims 1-11 presented in the underlying International Application No. PCT/DE2004/002176, and add new claims 12-22 as shown in the listing of claims.

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-11 (canceled)

12. (New) A method for treating a crystal having nonlinear optical properties and including foreign atoms which bring about specific absorption of incoming light, the method comprising:

converting the foreign atoms in the crystal to a lower valency state by oxidation, thereby liberating electrons;

removing the liberated electrons from the crystal using an external current source during the oxidation.

13. (New) The method as recited in Claim 1, wherein the crystal comprises one of the following: a lithium niobate crystal and a lithium tantalite crystal.

14. (New) The method as recited in Claim 1, wherein the foreign atoms comprise doping elements provided to the crystal by doping prior to the oxidation.

15. (New) The method as recited in Claim 14, wherein the doping elements comprise at least one of the following extrinsic ions: iron ions, copper ions, and manganese ions, the extrinsic ions existing in a concentration of more than $1 \times 10^{25} m^{-3}$, and said extrinsic ions increasing the dark conductivity of the crystal.

16. (New) The method as recited in Claim 1, wherein the lower valency state comprises 3+.

17. (New) The method as recited in Claim 1, further comprising:

placing the crystal between a plurality of electrodes, which are connected to a voltage source; and

applying between the plurality of electrodes a voltage substantially between 1 V and 1200 V.

18. (New) The method as recited in Claim 17, wherein one of the electrodes comprises a corona electrode which is not in contact with the crystal, the corona electrode, being connected to a negative terminal of the voltage source.

19. (New) The method as recited in Claim 17, wherein the voltage is:

substantially 1000 V if one of the plurality of electrodes comprises a corona electrode which is not in contact with the crystal; and

substantially 10 V if the plurality of electrodes are contacting the crystal.

20. (New) The method as recited in Claim 1, wherein the external current source generates a current in the crystal substantially between 0.01 mA and 15 mA.

21. (New) The method as recited in Claim 1, wherein the oxidation produces a crystal temperature substantially between 300 °C and 1200 °C.

22. (New) A nonlinear optical component including foreign atoms and produced according to the process of Claim 1, wherein the component has a residual absorption of less than 0.4 mm^{-1}.